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High Performance, Wide Bandwidth **Accelerometer Evaluation Board**

EVAL-ADXLO01

GENERAL DESCRIPTION

The EVAL-ADXL001 is a simple evaluation board that allows users to quickly evaluate the performance of the ADXL001 vibration sensor. The EVAL-ADXL001 is specifically designed to mount on to a mechanical shaker and is constructed of an extra thick PCB, measuring 0.8 inches square. Screw holes are supplied for rigid mounting to the shaker block. This design allows users to easily evaluate the full performance range of the ADXL001 vibration sensor without having to solder the device to a separate test board. Solder pads are included that allow users to implement their own application-specific low-pass filter on the output of the device.

CIRCUIT DESCRIPTION

The schematic for the EVAL-ADXL001 is shown in Figure 1. This circuit was designed to allow for a user-configurable lowpass filter on the device output. When no low-pass filter is needed, users must short the R1 solder pads together, and it is recommended that a bypass capacitor (22 nF) be placed on C2 for improved EMI rejection.

V_{DD} and V_{DD2} are shorted together internally on the PCB. This is consistent with normal device operation.

The board layout of the EVAL-ADXL001 is shown in Figure 2 and the parts list for the EVAL-ADXL001 is shown in Table 1. As delivered, there is no bandwidth limit set for the ADXL001. It is recommended that a ~75 kHz low-pass filter be added to mitigate high frequency noise outside of the vibration band of interest.

SPECIAL NOTES ON HANDLING

The EVAL-ADXL001 is not reverse polarity protected. Reversing the power supply or applying inappropriate voltages to any pin may damage the EVAL-ADXL001.

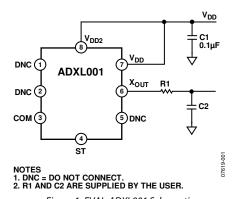


Figure 1. EVAL-ADXL001 Schematic

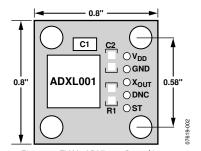


Figure 2. EVAL-ADXL001 Board Layout

Table 1. EVAL-ADXL001 Parts List

Component	Value (nF)
C1	100
C2	Not included
R1	Not included

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EVAL-ADXL001

ORDERING INFORMATION

ORDERING GUIDE

Model	Package Description
EVAL-ADXL001-70Z ¹	Evaluation Board
EVAL-ADXL001-250Z ¹	Evaluation Board
EVAL-ADXL001-500Z ¹	Evaluation Board

¹ Z = RoHS Compliant Part.

ESD CAUTION



ESD (electrostatic discharge) sensitive device. Charged devices and circuit boards can discharge without detection. Although this product features patented or proprietary protection circuitry, damage may occur on devices subjected to high energy ESD. Therefore, proper ESD precautions should be taken to avoid performance degradation or loss of functionality.